

5. Project Location - Early Alternatives

In the early 1990s as intermodal traffic grew and support developed in Michigan to address this growth, MDOT/Mercer examined six options for increasing capacity that focused on specific sites within the Greater Detroit Area in 1993/1994:

- Expand existing terminals by restructuring rail operations.
- Convert auto loading facilities to intermodal use.
- Develop Michigan State Fairgrounds.
- Develop Michigan Central Depot.
- Develop original Ford Motor Company property in Highland Park.
- Develop a single, joint intermodal facility.

MDOT/Mercer developed screening criteria to evaluate each option: six criteria to screen a facility's physical characteristics; and, three criteria to address commercial considerations (Table 4).

The six options were evaluated according to the criteria in the following manner:

- Each option was rated "high," "medium," or "low" corresponding to a 3,2,1 numerical rating, respectively.
- The nine criteria were considered equally important.
- A total score was tabulated by adding the ratings for the nine criteria.

The results of the evaluation are shown on Table 5.

MDOT/Mercer also examined a host of barriers and opportunities:

- Market requirements/shifts.
- Modal competition.
- Physical network.
- Transportation technology.
- Institutional needs.

Table 4
Screening Criteria

	Criteria	Major Desired Characteristics
Facility Screens	Size/Capacity	<ul style="list-style-type: none"> ■ Capacity to meet future demand
	Ownership/Control	<ul style="list-style-type: none"> ■ Owned by an operating RR or public agency willing to develop as an intermodal facility
	Rail/Highway Access	<ul style="list-style-type: none"> ■ Few rail congestion problems ■ Easy access to major arterial highways ■ Optimally located with respect to shippers/receivers
	Current Use/Ease of Development	<ul style="list-style-type: none"> ■ Current rail use or easy conversion ■ Minimal neighborhood/environmental impacts
	Financial Requirements	<ul style="list-style-type: none"> ■ Reasonable land acquisition costs ■ Reasonable development costs ■ Land area suitable for efficient operations
	Safety and Security	<ul style="list-style-type: none"> ■ Safety of access and operations ■ Security of staff, cargo, and equipment
Commercial Screens	Current Customer Requirements	<ul style="list-style-type: none"> ■ Meets current and expected needs
	Ability to Attract New Customers	<ul style="list-style-type: none"> ■ Potentially attractive site, location, and services
	Intermodal Business Mix Issues	<ul style="list-style-type: none"> ■ Compatibility of multiple geographic markets, equipment, and customer segments

Source: Mercer Management Consulting

Table 5
Evaluation of Options

Screening Criteria	Weight	Options					
		1	2	3	4	5	6
		Current Terminals	Option 1 + Auto Ramps	Option 1 + Develop Fairgrounds	Option 1 + Develop MC Depot	Option 1 + Develop Highland Park Property	Develop Junction Yard as a Megaterminal
Size/Capacity	1	2	3	1	1	1	3
Ownership/Control	1	2	2	1	1	1	2
Rail/Highway Access	1	2	2	2	2	2	2
Current Use/Ease of Development	1	2	2	1	1	1	3
Financial Requirements	1	3	2	1	1	1	1
Safety and Security	1	2	2	2	1	2	2
Current Customer Requirements	1	2	2	2	2	2	2
Ability to Attract New Customers	1	1	2	2	1	1	3
Intermodal Business Mix Issues	1	2	1	2	1	1	3
Total		18	18	14	11	12	21

Source: Mercer Management Consulting

High = 3
Medium = 2
Low = 1

- Financial issues.
- Legislative/public policy issues.

MDOT/Mercer concluded in 1993/1994 that a single, joint facility is the best long-term solution to meet the GDA's intermodal needs. Other options could be pursued independently by the railroads to meet short-term needs. And, in fact, Option 1 on Table 1 is carried into the EIS as the No Action alternative. This does not mean no growth in GDA intermodal activity, but continuation of trends with limited MDOT investment and no federal investment from the funds currently available for the DIFT project.

Recent information gathered for the DIFT EIS ratifies the earlier Mercer conclusion that capacity is a problem and consolidation is the best way to address that issue. For example:

- The operations of the NS Oakwood site, just north of I-75 off Schaefer, have already shifted to the Detroit-Livernois Yard.
- The NS Triple Crown site, just west of the NS Oakwood site in Melvindale, serves RoadRailer traffic. It has experienced capacity issues in the past, which have been met through use of other facilities. It is a strong candidate for near-term relocation to the NS-controlled portion of the Detroit-Livernois Yard, especially because NS has already shifted the Oakwood operations there.

- The NS Delray Yard on the southeast side of I-75 at Springwells has little or no room for expansion.
- The CP Expressway (CPE) operation at the rear of Michigan Central Depot (on the south side of Michigan Avenue) has limited room to expand. CP is at this location under a relatively short-term lease arrangement.
- The Canadian Pacific Railroad (CPR) Oak site on the north side of I-96, west of the Southfield Freeway is at capacity, is landlocked (no adjacent land for expansion), and operates on leased property.
- The CN Moterm site is adjacent to the State Fairgrounds near 8 Mile Road, between Woodward Avenue and I-75. This site has had capacity problems in the past.
- The Mazda terminal, served by CN, which ships primarily new cars direct from its Flat Rock plant near the south Wayne County line is not likely to move as intermodal shipments are tied to the plant site.

Taken together, the above information indicates the potential for consolidation at one site.

A second phase of work was then undertaken. Nine locations were identified as potential sites for the intermodal transportation center:

- Willow Run Airport and adjacent General Motors property.
- General Motors Hamtramck BOC manufacturing plant.
- Jones West Detroit River property.
- Conrail Rouge Yard.
- Highland Park, Ford property.
- Highland Park, Chrysler property.
- Junction Yard.
- Cadillac Fleetwood property.
- GM Cadillac – Clark Street property.

Because the intermodal transportation center would require over 200 acres, four alternatives were considered viable:

- Willow Run Airport.
- Rouge Yard.
- Highland Park (Ford and Chrysler property).

- Junction Yard and Cadillac-Clark Street property.

The advantages/disadvantages of these four sites ruled out the Willow Run and Rouge Yard sites (Table 6).

Table 6
Site Evaluation

Site	Advantages	Disadvantages	Suitable for Further Analysis?
Willow Run Site	<ul style="list-style-type: none"> ■ Single owner ■ Safety and security ■ "Greenfield" site allows for design flexibility 	<ul style="list-style-type: none"> ■ Farthest site from the market – extremely high pickup and delivery costs ■ Single line RR access, proposed for high speed passenger service ■ Alternative land use plan ■ GM property is too small by itself 	No
Conrail Rouge Yard	<ul style="list-style-type: none"> ■ Single owner ■ Access for three Class I railroads 	<ul style="list-style-type: none"> ■ Active RR yard ■ Yard is too small by itself 	No
Highland Park – Ford and Chrysler	<ul style="list-style-type: none"> ■ Excellent highway access ■ Chrysler will demolish existing buildings on their property 	<ul style="list-style-type: none"> ■ Single line RR access ■ Ford buildings have been designated as a historical site ■ Disconnected parcels ■ Safety and security concerns 	Yes
Conrail Junction Yard and Cadillac-Clark Street	<ul style="list-style-type: none"> ■ Single owner ■ Largest site ■ Unique rail access – all Class I ■ Good highway access 	<ul style="list-style-type: none"> ■ Safety and security concerns ■ Multiple jurisdictions (Dearborn and Detroit) ■ Potential competing uses 	Yes

Source: Mercer Management Consulting

The two candidate sites remaining were further evaluated using the screening criteria developed in Phase 1 of the Mercer (Table 7). From this analysis, it was determined by MDOT/Mercer that the Junction Yard/Cadillac-Clark Street alternative is the most attractive site. In making this choice, it was recognized the area has the following attributes:

- It is accessible to all Class I railroads (Canadian National, Canadian Pacific, CSX Transportation, Norfolk Southern) and is centrally located between I-75 and I-94, Michigan's principal commercial highways and international corridors.
- It is centrally located with respect to shippers in southeast Michigan.
- It is predominantly zoned for industrial or manufacturing purposes.

Table 7
Evaluation of Options Based on Screening Criteria
 (assumes equal weighting of criteria)

Screening Criteria	Ford and Chrysler Highland Park	Junction Yard and Cadillac-Clark	Rationale
Size/Capacity	2	3	Highland Park smaller
Ownership/Control	2	1	Possible competing use of Junction Yard
RR Access	1	3	All rail carriers can easily reach Junction Yard
Highway Access	3	2	Highland Park site is closer to trunk highways
Current Use/Ease to Develop	2	3	Site immediately developable
Financial Requirements	2	3	Site development costs less for Junction Yard
Safety and Security	1	1	Security concerns at both sites need to be mitigated
Current Customer Requirements	2	3	Better layout and adjacent use at Junction Yard
Ability to Attract New Customers	1	3	Co-location (long-term) of transportation-related activities
Intermodal Business Mix	2	3	Better GDA location at Junction Yard
Total (maximum = 30)	18	25	

Source: Mercer Management Consulting

High = 3
 Medium = 2
 Low = 1

Greenfield Site

One of the key benefits of the proposed DIFT is its location. At the northeast corner of the proposed DIFT development, at a railroad point called West Detroit, each of the four trunkline railroads serving the Greater Detroit Area touch. Canadian National (CN) and Norfolk Southern (NS) reach West Detroit over their own lines while Canadian Pacific (CPR) and CSX reach it either with trackage rights (CPR) or ownership of Conrail (CSX). There is no other location in the Greater Detroit Area or the state of Michigan where this occurs.

Each of the railroads reaches Detroit over a network of individually-owned rail lines. It should be noted that there are locations along those lines where tracts of largely undeveloped land, otherwise known as “greenfields,” might be available for the development. But only one railroad would be able to reach that hypothetical new intermodal terminal location.

Another issue with a “greenfield” site is that those undeveloped properties tend to be well removed from the shippers that they will be serving. This results in increased drayage and contributes to highway congestion. Of special concern is that large volumes of truck traffic may be forced to utilize a single highway route to reach the site. A central location such as the proposed DIFT results in a dispersal of traffic over several alternate corridors involving non-residential/local roads. “Greenfield” developments may also contribute to urban sprawl and require new highway, utility and other infrastructure. Conversely, for the most part, the proposed DIFT is able to use the established infrastructure that is already in place and in some cases underutilized.

The earlier Mercer studies examined possible “greenfield” sites. One, Willow Run, while having several attributes, was served by only a single railroad at the time, Conrail. Since the sale of Conrail, Norfolk Southern now controls access to the location. A “greenfield” site as a substitute for the DIFT is much less attractive because of rail, highway and land development issues. So, for the purposes of a DIFT-like project a “greenfield” site is both unworkable as well as unattainable.